# Practice 9.1 Create a Custom Chart

*Scenario*

Judith Walker, Head of Services at Adventure Works Cycles, needs to assess customer satisfaction for recently resolved service Cases.

She asks you to create a chart to use on a dashboard showing the number of Feedback responses in each month, broken down by the satisfaction rating. Judith already has a dashboard which shows volumes of work in the service department. For this new chart, she needs to see how the proportions of the satisfaction ratings change from month to month rather than the actual number of responses.

*Objectives*

In this lab you will create a chart of Feedback records, using a category from the Cases they are related to. You will then test the chart before adding it to a dashboard.

*Lab Setup*

Before starting this lab, you will need to complete the lab exercise “*Create a Custom View for the Prototype Entity*” in the module “*Customizing Views*”.

*Exercise Scenario*

To meet Judith’s requirements you must create a chart categorized by the month the related Case was resolved.

Instead of creating a custom field to use for the date a Case is resolved, note that you can use the Modified On field which will provide the same result. Cases cannot be modified after they are closed (unless they are re-opened first). When you use the chart on a dashboard you will be able to associate it with a view of recently resolved Cases to make sure this is a valid approach.

Because Judith is more interested in the relative proportions of the satisfaction ratings each month than in the actual number of Cases closed or Feedback responses received, you must create a 100% Stacked Column to make the visualization clearer.

**Task 1: Create a 100% Stacked Column Chart**

High Level Steps

1. Open the **NPD and Feedback** Solution and create a chart for the Feedback entity.
2. Configure the new chart as described in the exercise scenario.
3. Save and publish the new chart.
4. Create some Feedback records.
5. Test the new chart.

Detailed Steps

1. Open the **NPD and Feedback** Solution and create a chart for the Feedback entity.
   1. Switch or Navigate back to your **NPD and Feedback** solution. Or click the Main button and navigate to **Settings** > **Solutions** and double-click the **NPD and Feedback** Solution to open it.
   2. Expand the **Entities** node of the solution explorer.
   3. Expand the **Feedback** node, then click **Charts**.
   4. In the action bar, click **New**. The chart configuration form will open
2. Configure the new chart as described in the exercise scenario.
   1. In the **View** used for chart preview at the top of the form, select the view called **Service Feedback Last 3 Months.**
   2. Below the heading **Legend Entries (Series)** click **Select Field** and select the **Satisfaction Rating** field from the top section of the list.
   3. To the right of the field name, click **Count:All** and select **Count:Non-empty**.
   4. To the right of the series row, click the **Column** button, then in the gallery which appears click the **Column** button (on the left), then select **100% Stacked Column**.
   5. Below the heading **Horizontal (Category) Axis Labels** click **Select Field** and select the **Modified On (Regarding)** field. Leave the date grouping at **Month**.
   6. Click **Add a Category**, then **Select Field** and select the **Satisfaction Rating** field from the top section of the list.
   7. Enter a new chart name **Feedback by Case Closed Month and Satisfaction** (or another name if you prefer).
3. Save and publish the new chart.
   1. Click **Save and Close** to close the chart configuration form.
   2. Click the **Feedback** entity in the solution explorer.
   3. On the toolbar, click **Publish**.
4. Create some Feedback records.
   1. Leave the **NPD and Feedback** window open for later labs.
   2. Switch back to your main CRM application and click the Main button, and Navigate to **Service** > **Cases**.
   3. On the command bar, click **New Case**.
   4. Click the **Case Title** field.
   5. Enter **Test1** (or your own name for this test record).
   6. Point to or click the **Customer** field, then click the lookup button to the right of it and select any Account from the list.
   7. The record will be automatically saved.
   8. In the social pane, under the **Activities** tab, click **Add More Activities** (with an ellipsis icon **…**), then click **Feedback**.
   9. In the new Feedback form, click the **Satisfaction Rating** field and use the option set control to select a rating.
   10. On the command bar click **Save** then click **Mark Complete**.
   11. Click the **Regarding** field to return to the Case form.
   12. Repeat steps **H.** through **K.** several times, selecting different satisfaction ratings for each new Feedback record.
   13. With the Case form open, on the command bar click **Resolve Case**.
   14. In the **Resolve Case** dialog box, click the **Resolution** field and enter **Fixed**.
5. Test the new chart.
   1. Navigate to **Service** > **Activities**.
   2. Click **My Activities** to show the list of available views.
   3. Click Feedback, then in the sub-menu, click **Service Feedback Last 3 Months**.
   4. On the right hand side of the screen, click **Charts** to expand the chart pane.
   5. Note that the column of the chart extends to 100 (%).
   6. Point to any data point in the chart (one column segment) and check that the infotip shows the correct number of responses.
   7. Click a data point and confirm the **Service Feedback Last 3 Months** view is filtered to match the category for that data point.

# Practice 9.2: Create a Modified Dashboard

Walker, Head of Services wants to include the chart of feedback ratings for recent service cases on a dashboard where it will be easily visible to all members of the service department. The department does not use Goals in Microsoft Dynamics 365, so Judith has identified that the Goal Progress chart on the Customer Service Performance dashboard can be removed to make space for the new one.

*Exercise Scenario*

In this exercise you create a copy of the Customer Service Dashboard, remove the Goal Progress chart and add the Feedback Satisfaction chart you created in the first lab in this module. You will then move the new chart to the top left to give it more prominence and then test your changes.

Task 1: Copy and Modify the Customer Service Performance Dashboard

High Level Steps

1. Create a copy of the **Customer Service Performance** dashboard in the **NPD and Feedback** solution.
2. Remove the Sales Pipeline Chart and replace it with the Feedback chart you created in the previous exercise.
3. Publish and test your new dashboard.

Detailed Steps

1. Create a copy of the **Customer Service Performance** dashboard in the **NPD and Feedback** solution.
   1. Switch to the **NPD and Feedback** solution if you still have the window open, otherwise Click the **Main** button, and navigate to **Settings** > **Solutions** and double-click the **NPD and Feedback** solution to open it.
   2. In the solution explorer, click **Dashboards**.
   3. On the action bar, click **Add Existing**.
   4. Select **Dashboard.**
   5. In the Select solution components dialog box, select **Sales Dashboard** click **OK**.
   6. Verify the **Sales Dashboard** is selected, and on the action bar, click **Save As**.
   7. In the Dashboard Properties dialog box, enter **Customer Service and Feedback** as the **Name** of the Dashboard. Enter something suitable for the **Description** (note you cannot change this later).
   8. Click **Enable for Mobile**.
   9. Click **Save**.
2. Remove the Sales Pipeline Chart and replace it with the Feedback chart you created in the previous exercise.
   1. Double-Click the **Customer Service and Feedback** Dashboard to open it up
   2. Locate the **Sales Pipeline chart** *(Bottom Row, Middle Column)*
   3. Click to Select it
   4. Press **Delete**.
   5. On the **Command Bar** at the top, click the **Chart** button
   6. Select **Feedback** from the **Record** type dropdown.
   7. Select **Service Feedback Last 3 Months** for the view.
   8. Select **Feedback by Case Closed Month and Satisfaction** under Chart.
   9. Click **Add**.
   10. Click the select the **Feedback by Case Closed Month** and Satisfaction chart
   11. Drag it between the Accounts list and the Top Customer chart
   12. Click **Save**.
   13. Click **Close**
   14. Click to select the **Customer Service and Feedback Dashboard**, and click the **Publish** button
3. Test the Dashboard
   1. Switch back to you CRM organization.
   2. Click the **Home** button (Microsoft Dynamics CRM)
   3. In the dashboard window, click the arrow next to **Sales Activity Dashboard**
   4. Choose **Customer Service and Feedback.**

### **Module 11: Business Process Flows**

# Practice 11.1: Create a Multi-Entity Business Process Flow

*Scenario*

Adventure Works Cycles want to make it as simple as possible for members of staff to follow the correct process for New Product Development.

To help with this, you must create a Business Process Flow which starts with a new Idea record and guides the user through the process to create a Prototype.

In the practice you will build the first few stages of this multi-entity business process flow, bringing together all of the customizations you have done so far and presenting them as a single logical flow, rather than separate entities

High Level Steps

1. Enable the Idea, Prototype and Feedback entities for Business process flows in the NPD and Feedback Solution.
2. Create a Business Process Flow in the NPD and Feedback Solution
3. Configure the **Gather Information** stage.
4. Add and configure stages for the **Prototype** entity.
5. Add and configure stages for the **Feedback** entity.
6. Activate the NPD New Idea Process.
7. Sign in as Ben Burton to test the process.
8. Test the NPD New Idea Process.

Detailed Steps

1. Enable the Idea, Prototype and Feedback entities for Business process flows in the NPD and Feedback Solution.
   1. If necessary, navigate to **Settings** > **Solutions** and open the NPD PBF Solution.
   2. In the solution explorer, expand **Entities**.
   3. Click **Idea**.
   4. In the entity properties page, in the **Process** section, select **Business process flows**.
   5. On the toolbar, click **Save**, and then click **Publish**.
   6. In the solution explorer, click **Prototype**.
   7. In the entity properties page, in the **Process** section, select **Business process flows**.
   8. On the toolbar, click **Save**, and then click **Publish**.
   9. In the solution explorer, click **Feedback**.
   10. In the entity properties page, in the **Process** section, select **Business process flows**.
   11. On the toolbar, click **Save**, and then click **Publish**.
2. Create a Business Process Flow in the NPD and Feedback Solution
   1. In the solution explorer, click **Processes**.
   2. In the menu bar, click **New**.
   3. In Process Name, enter NPD New Idea Process.
   4. In the Category list, select Business Process Flow.
   5. In the **Entity** list, select **Idea**.
   6. Click **OK**.
3. Configure the **Gather Information** stage.
   1. In the NPD New Idea Process form, in the **Stages** column, click **NEW STAGE**, and then enter a stage name of **Gather Information** (this will be converted to all uppercase no matter how you type it).
   2. In the **Stage Category** column, select **QUALIFY**.
   3. In the **Fields** column, click the **--** prompt and select **Name**.
   4. In the **Required** column, select the check box next to **Name**.
   5. At the top of the **Steps** column, click the **+** button to add a new step.
   6. In the **Fields** column, select **Target Market Size**.
   7. In the **Required** column, select the check box next to **Target Market Size**.
4. Add and configure stages for the **Prototype** entity.
   1. In the **Included Entities** section, click **+/- Options** to add a new entity, and then click **Prototype**. **Note**: the process designer only displays the stages for one entity. To view the previous stage, click **IDEA** in the **Included Entities** section.
   2. In the **Stages** column, click **NEW STAGE**, and then enter a stage name of **Initial Scope**.
   3. In the **Stage Category** column, select **DEVELOP**.
   4. In the **Fields** column, select **Name**.
   5. At the top of the **Steps** column, click the **+** button to add a new step.
   6. In the **Fields** column, select **Currency**.
   7. In the **Required** column, select the check box next to **Currency**.
   8. At the top of the **Steps** column, click the **+** button to add a new step.
   9. In the **Fields** column, select **Budget**.
   10. In the **Required** column, select the check box next to **Budget**.
   11. At the top of the **Stages** column, click the **+** button to add a new stage.
   12. In the **Stages** column, click **NEW STAGE**, and then enter a stage name of **Planning**.
   13. In the **Stage Category** column, select **RESEARCH**.
   14. In the **Fields** column, select **Planned Completion**.
   15. In the **Required** column, select the check box next to **Planned Completion**.
5. Add and configure stages for the **Feedback** entity.
   1. In the **Included Entities** section, click **+/- Options** to add a new entity, and then click **Feedback (Regarding)**. **Note**: the process designer only displays the stages for one entity. To view the previous stage, click **IDEA** or **PROTOTYPE** in the **Included Entities** section.
   2. In the **Stages** column, click **NEW STAGE**, and then enter a stage name of **Feedback**.
   3. In the **Stage Category** column, select **RESOLVE**.
   4. In the **Fields** column, select **Subject**.
   5. At the top of the **Steps** column, click the **+** button to add a new step.
   6. In the Fields column, select Satisfaction Rating.
   7. In the **Required** column, select the check box next to **Satisfaction Rating**.
6. Activate the NPD New Idea Process.
   1. On the toolbar, click **Save**.
   2. Click Enable Security Roles.
   3. In the **Enable Security Roles** dialog box, click **Enable for everyone**, and then click **OK**.
   4. On the toolbar, click **Activate**.
   5. In the Process Activation Confirmation dialog box, click Activate.
7. Test the NPD New Idea Process.
   1. In your Main CRM application window, click the **Main** button, and navigate to **Sales** > **Ideas**.
   2. On the command bar, click **New**.
   3. In Name, enter Waterproof saddle covers.
   4. On the command bar, click **Save**.
   5. On the right side of the screen, click **Next Stage**. Note: you cannot progress beyond this stage because the **Target Market Size** field is required by the process. The field is *not* required on the form.
   6. In the body of the form, enter a **Target Market Size** of **9,000,000**.
   7. On the right side of the screen, click **Next Stage**, and then click **Create**.
   8. In Name, enter Disposable polythene cover.
   9. On the command bar, click **Save**.
   10. In the process bar, click the stage called **Gather Information**. This returns you to the Idea entity.
   11. On the right side of the screen, click **Next Stage**, and then click **Create** to create a second Prototype record.
   12. In Name, enter **Elasticated PVC** **Cover**.
   13. On the command bar, click **Save**.
   14. In the process bar, click the stage called **Gather Information**.
   15. On the navigation bar, to the right of the Idea name **NPD Process Test**, click the drop down arrow, and then click **Prototypes**.
   16. Double-click **Disposable polythene cover**. **Note**: you cannot progress this Prototype to the next stage of the process because the second Prototype has replaced it.
   17. In the process bar, click the stage called **Gather Information**.
   18. On the navigation bar, to the right of the Idea name **NPD Process Test**, click the drop down arrow, and then click **Prototypes**.
   19. Double-click Elasticated PVC cover.
   20. In the process bar, in **Budget**, enter **$5,000**.
   21. On the right side of the screen, click **Next Stage**, and then click **Next Stage** again, and then click **Create**.
   22. In Subject, enter **The process works**.
   23. In Satisfaction Rating, select Very Happy.
   24. On the command bar, click **Save**.
   25. Click Mark as Complete.
   26. In the process bar, click the stage called **Initial Scope**. **Note**: this displays the last stage the Prototype entity reached in the process, not the stage selected.
   27. Close all application windows.

# **Module 12: Introduction to Processes**

# Practice 12.1: Design a Workflow that automatically creates and Assigns Task Activities

*Scenario*

Adventure Works Cycles want to assign follow up tasks to their Account Reps when new Opportunities are created. The first is a new product prototype, and the second is an enhancement prototype for existing products. Alan Jackson is responsible for testing and providing feedback for new prototypes and Connie Watson is responsible for providing feedback on enhancements.

When an Opportunity record is created, you need to capture if it is for a new or existing product. If it is new, a task record will be created and assigned to Alan, and if it is an Enhancement, a task record will be created and Assigned to Connie.

To accomplish this, you will need to create a custom Option Set field on the Opportunity entity.

The Details of that field are below:

|  |  |
| --- | --- |
| **Name** | **Type** |
| Data Type | Option Set |
| Values | * New * Enhancement |

You need to add that field to the Opportunity form, and then create a new workflow that will run for every user anytime an Opportunity record is created. It needs to check the type field.

**The specifics are below:**

* If type = New then create a New Task and Assign Alan as the Owner
* If type = Enhancement, then create a New Task and Assign it to Connie.

High Level Steps

1. Create a new local option set on the Opportunity Entity called Type with New and Enhancement as the Values.
2. Add the Type field to the Opportunity Form.
3. Create a New Workflow that runs for every user when a new Opportunity is created.
4. When the Type field = New, Create a new Task and Assign it to Alan
5. When the Type field = Enhancement, Create a new Task and Assign it to Connie.
6. When the Opportunity does not contain a Type, exit the workflow.
7. Activate and Test the Workflow.

## Detailed Steps

1. Create a new local option set on the Prototype Entity called Type with New and Enhancement as the Values.
2. Navigate to **Settings** > **Solutions** and click new to create a New Solution.
3. Name the Solution **NPD and Feedback**.
4. Set the Publisher to the **Default Publisher**.
5. Set the Version Number to **1.0.0.0**.
6. Select Entities, and click **Add Existing.**
7. Select the **Opportunity** Entity, and click **OK**,
8. On the select **Entity Assets** screen check **Add All Assets**, and click **Finish**.
   1. If prompted, include required missing components.
9. Expand **Entities**.
10. Expand **Opportunities**.
11. Click **Fields**.
12. Click **New**.
13. Enter **Type** for the **Display Name**.
14. Set the **Data Type** to **Option Set**.
15. Click the **Green Plus Sign** to add a new option.
16. Enter **New** in the Label.
17. Click the **Green Plus Sign** again.
18. Enter **Enhancement** in the Label.
19. Leave the **Default Value** as **Unassigned**.
20. Click **Save and Close**.
21. Add the Type field to the Opportunity Form.
    1. In the **NPD Feedback Solution**, under **Opportunities**, click **Forms**.
    2. Open the **Main** Information form for the Opportunity Entity.
    3. In **Field Explorer** find the **Type** Field.
    4. Drag it just below the **Budget Amount** Field.
    5. Click **Save**.
    6. Click **Publish**.
    7. Click **Save and Close**.
22. Create a New Workflow that runs for every user when a new Opportunity is created.
    1. In the **NPD Feedback Solution**, click **Processes**.
    2. In the **Processes** window, click on **New**.
    3. In the **Process Name** field, Enter **Assign Tasks**.
    4. In the **Category** field, select **Workflow**.
    5. In the Entity dropdown, choose **Opportunity**.
    6. Click **OK**.
    7. Change the **Scope** field from User to **Organization**.
    8. Verify that **Record is created** is selected.
23. When the Opportunity Type field = New, Create a new Feedback and Assign it to Alan.
    1. In the workflow designer window, click the **Add Step** button.
    2. From the **Menu** that appears, select check condition.
    3. Enter **Check Opportunity Type** in the Description.
    4. In the condition, **select (Click to Configure).**
    5. Click on **Select**.
    6. Select **Opportunity**.
    7. In the next field, select **Type**.
    8. In the **Operator** field, select **equals**.
    9. Where it says enter value, click the **Ellipsis …**
    10. In the **Available Values**, select **New**.
    11. Click the button with the 2 arrows pointing right to move it to the **Selected Values**.
    12. Click **OK**.
    13. Click **Save and Close** on the Condition.
    14. Underneath the condition, click **“Select this row and click Add Step”**.
    15. Click **Add Step.**
    16. From the menu that appears Select **Create Record**.
    17. In the Description, enter **Create Task for Alan**.
    18. In the Dropdown menu, select **Task**, and click **Set Properties**.
    19. In the **Subject** field, enter **New Product Feedback Task**.
    20. In the **Owner** field click the lookup icon, and select **Alan Jackson**.
    21. Click **Save and Close**.
24. When the Type = Enhancement, Create a new Task and Assign it to Connie. Add and configure stages for the **Prototype** entity.
    1. Select **if Opportunity Type equals New, then** Condition (Everything should highlight blue).
    2. Click **Add Step**.
    3. Select **Conditional Branch**.
    4. In the condition, select (Click to Configure).
    5. Click on **Select**.
    6. Select **Opportunity**.
    7. In the next field, select **Type**.
    8. In the **Operator** field, select **equals**.
    9. Where it says enter value, click the **Ellipsis …**
    10. In the **Available Values**, select **Enhancement**.
    11. Click the button with the 2 arrows pointing right to move it to the **Selected Values**.
    12. Click **OK**.
    13. Click **Save and Close** on the **Condition**.
    14. Underneath the condition, click **Select** this row and click **Add Step**.
    15. Click **Add Step**.
    16. From the menu that appears **Select Create Record**.
    17. In the Description, enter **Create Task for Connie**.
    18. In the Dropdown menu, select **Task**, and click **Set Properties**.
    19. In the **Subject** field, enter **Enhancement Product Feedback Task**.
    20. In the **Owner** field click the lookup icon, and select **Connie Watson**.
    21. Click **Save and Close**.
25. When the Prototype does not contain a Type, exit the workflow.
    1. Select **if Opportunity Type Equals New, then** Condition *(Everything should highlight blue).*
    2. Click **Add Step**.
    3. Select **Default** **Action**.
    4. Click **Select** this row and click **Add Step**.
    5. Click **Add Step**.
    6. Select **Stop Workflow**.
26. Activate and Test the Workflow.
    1. From the **Command Bar** on the Workflow, click **Activate**.
    2. Click **Activate** to confirm activation.
    3. Close the Workflow.
    4. Leave the **NPD and Feedback** solution open for later.
    5. Switch back to your Main Dynamics 365 application window.
    6. Click the **Main** button, then navigate to **Sales** > **Opportunities**.
    7. From the **My Open Opportunities** screen, click **New**.
    8. Enter **New Infant helmet** for the **Topic**.
    9. In the **Type** field, select **New**
    10. Click **Save and Close**
        1. **Note:** *This is a background workflow, so it can take several seconds for the feedback record to be created. Wait about 30 seconds to a Minute before proceeding.*
    11. Open the **New Infant Helmet Opportunity** record
    12. In the **Activities Pane**, click on **Activities**
    13. A **Task** called **New Product Feedback Task** will display
    14. *You can repeat the steps to add an Enhancement Record as well.*